

Title (en)

Degraded hydrophobic, particulate starches and their use in paper sizing

Title (de)

Degradierte, hydrophobierte und feinteilige Stärke und ihre Verwendung als Papierleimungsmittel

Title (fr)

Amidons particuliers, hydrophobes et dégradés et l'application comme agents d'encollage pour papier

Publication

**EP 1103565 B1 20050323 (EN)**

Application

**EP 00124381 A 20001120**

Priority

- US 44749399 A 19991123
- US 69845600 A 20001027

Abstract (en)

[origin: EP1103565A1] This invention is directed to degraded, hydrated particulate starches that are hydrophobically modified and a method of providing paper with reduced porosity, resistance to liquid penetration and increased surface strength comprising applying to the surface of a paper substrate an effective amount of a surface sizing composition which comprises such starch. In particular, the starches are those in which the starch base is degraded to a water fluidity (WF) of from about 10 to 80 or the modified and/or particulate starch is degraded using a substantially equivalent amount of degradation agent and substantially the same reaction conditions, the starch is modified with a hydrophobic hydrocarbon group of 5 to 23 carbon atoms at about 1 to 20% substitution level by weight of bound hydrophobe based on the weight of starch, and the hydrated starch has a volume average hydrated particle size of at least about 20 microns and a volume fraction of hydrated particles at 1% solids of at least about 5%.

IPC 1-7

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IPC 8 full level

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CPC (source: EP KR)

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Cited by

CN103556538A; EP1761568A4; EP1925298A1; FR2855840A1; DE10326738B4; US8444819B2; US8574624B2; WO2007055912A1; WO2009053017A1; WO2005024131A1; WO2005003456A1; WO03078732A3

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